

REMARKS/ARGUMENTS

Reconsideration and allowance are respectfully requested. Claims 1-4 and 8-21 are now pending. No new matter is added.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 11-19 are rejected under 35 U.S.C. § 112, second paragraph as being indefinite for lacking antecedent basis for “sensing paths.” In claim 11, “sensing paths” is changed to “sensing traces,” and so it is believed that this rejection is overcome.

Art-Based Rejections

Of the pending claims, the following rejections are made. Claims 8-10 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tamaru, et al. (U.S. Patent No. 4,571,454, hereinafter referred to as Tamaru). Claims 1-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Russell (U.S. Patent No. 5,276,282, hereinafter referred to as Russell) in view of Tamaru. Claims 11-19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Russell in view of Blesser (U.S. Patent No. 4,694,124, hereinafter referred to as Blesser), and further in view of Tamaru. Applicant respectfully traverses these rejections in view of the amendments and remarks herein.

Independent Claim 8

Independent claim 8 recites an electromagnetic digitizer sensor, comprising a substrate having first and second different levels; an array of first sensing loops each disposed at the first level but not the second level; and an array of second sensing loops each disposed at the second level but not the first level.

While Tamaru discloses X and Y strip electrodes, the electrodes are strip electrodes that do not loop. Thus, Tamaru fails to teach or suggest sensing *loops*. In contrast, an example of a sensing loop is shown in Fig. 5 of Applicant’s specification.

Thus, it is submitted that claim 8 is allowable over Tamaru, since Tamaru does not teach or suggest all of the elements recited in claim 8.

Independent Claim 1

Independent claim 1 as amended recites a first array of sensing loops each disposed at a first level of a substrate but not at a different second level of the substrate, and a second array of sensing loops each disposed at the second level but not the first level.

Neither Russell nor Tamaru individually teaches or suggests the above-recited feature. Moreover, even if the strips of Tamaru were somehow attempted to be combined with the loops of Russell (the combination of which is not conceded to be proper), at best the modified version of Russell would have sensing loops configured as in typical prior art digitizers. More specifically, Russell would require conventional through-holes to provide loops that do not short-circuit, as explained in Applicant's specification at paragraphs 3 and 4 and Fig. 1.

In contrast, in an illustrative embodiment consistent with claim 1 as shown in Fig. 4, Applicant has developed a device with a particular switch configuration and trace layout that allows multiple X and Y sensing loops to be provided on a substrate at different levels without requiring through-holes to prevent short-circuiting. This may allow a digitizer device to have traces utilizing only a single layer per sensing axis. Specification, paragraph 9. Thus, a digitizer may now be fabricated in a technology, such as indium tin oxide on glass, that cannot provide plated-through holes. *Id.*

For at least these reasons, it is submitted that claim 1 is allowable over Tamaru and Russell, either alone or in combination as proposed.

Independent Claim 11

Independent claim 11 as amended recites first and second pluralities of sensing traces disposed at a first level of a substrate but not at a second level of the substrate, and third and fourth pluralities of sensing traces disposed at the second level but not at the first level.

Thus, it is submitted that claim 11 is allowable over Tamaru and Russell for at least similar reasons as described above with regard to claim 1. Nor does the attempted addition of Blesser make up for the above-discussed deficiencies of Tamaru and Russell.

Dependent Claims

It is submitted that the dependent claims are also allowable by virtue of depending from allowable independent claims, and further in view of the additional features recited therein.

For example, none of the art of record, either alone or in combination, teaches or suggest first and second pluralities of sensing traces forming conductive loops that are variable in *both* size and position depending upon states of first and second pluralities of switches, as recited in new dependent claim 20.

Conclusion

All rejections having been addressed, applicants respectfully submit that the instant application is in condition for allowance, and respectfully solicit prompt notification of the same. In the meantime, should the Examiner have any questions, the Examiner is invited to contact the undersigned at the number below.

Respectfully submitted,
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